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ABSTRACT

Massachusetts Management and Information System for Occupational Education (MISOE) is the prototype for a man machine information system for the statewide management of vocational education at the secondary, post-secondary, and adult levels. Intended to provide a rational process of resource allocation for vocational education as a competitive social service agency, MISOE contains both a static and a dynamic component. Static MISOE, composed of an interrelated census and sample data system which includes the stipulation of program costs and performance objectives for each local education agency in the state, is intended to be the basis for accountability for all of Massachusetts' vocational education programs. Various cost effectiveness analyses will be carried out for static MISOE, which will be integrated with existing Department of Education and Regional Board of Community College information systems. In the summer of 1973, dynamic MISOE, consisting of dynamic simulation and mathematical programing, will be developed. MISOE will be implemented statewide by Massachusetts' Division of Occupational Education during the 1973 school year, with the assistance of five local education agencies. Related documents are available in this issue as VT 018 600, VT 018 606, VT 018 809, and VT 018 810. (AG)

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In Development

Management and Information System

for

Occupational Education

An Overview

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The Management and Information System for Occupational Education (MISOE) is a prototypical interactive information system for the statewide management of occupational education at all levels, i.e., secondary, post secondary and adult. MISOE connects occupational education to the society it is designed to serve such that it supports a rational process of resource allocation to occupational education as a competitive social service agency.

MISOE can be described as including both a Static and Dynamic component. Static MISOE describes the now dimensions of occupational education in Massachusetts, including: (1) the students served; (2) the cost; (3) the process; (4) the product and (5) the overtime impact of the product on society. A part of Static MISOE is a description of the comparative cost/benefit ratios within occupational education and between occupational education and non-occupational education, as well as an estimation of the comparative efficiency of competing occupational education programs. Static MISOE is composed of a connectable census and sample data system which includes the stipulation of program costs and performance objectives for each LEA in Massachusetts offering occupational education. Static MISOE is an interactive system, which allows man, the manager, to browse and access data files at his leisure, and self-determine required information. Static MISOE is designed to be the basis for accountability for all occupational education in Massachusetts. Static MISOE is being structured to be integrated with existing Department of Education and Regional Board of Community College information systems, and will eliminate all double reporting for occupational education on the part of LEAs. MISOE will "spin off" all reporting requirements on the part of the Division of Occupational Education (DOE).

Dynamic MISOE is comprised of two functions: dynamic simulation

and mathematical programming. Dynamic simulation is currently under full development, and allows managers of occupational education at all levels (over all education, over occupational education and within occupational education) an explicit process to model likely consequences of current decisions in future time before committing precious resources. Dynamic simulation is an application of a scientific development process, and p o-vides a management tool of enormous power which involves simple calculus, thereby putting it within the easy reach of current management. Obviously, Dynamic MISOE is connected to Static MISOE, with the latter providing an estimation of parameters for the former.* Given an understanding of the consequences of alternative decision making, the optimization of resource allocation is determined by mathematical programming, the last component of MISOE to be developed. Development of this component will not begin until the Summer of 1973.

MISOE is currently being developed by DOE and will be implemented during school year 1973-74 on a statewide basis. Assisting DOE in the development are the following Local Education Agencies:

1. Boston City Schools
2. Quincy City Schools
3. Newton School Department
4. Greater Lawrence Regional Vocational Technical School
5. Northeast Metropolitan Regional Technical School

*Static and Dynamic MISOE are well described in Occasional Paper #6, "MISOE In Motion", Dr. William G. Conroy, Jr. and Elizabeth Weinberger, 1972.